

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P545284

Luminaire Tested: **FMR-12-2-LD4-1HI-40-UNV-81-94-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P545284
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-12-2-LD4-1HI-40-UNV-81-94-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

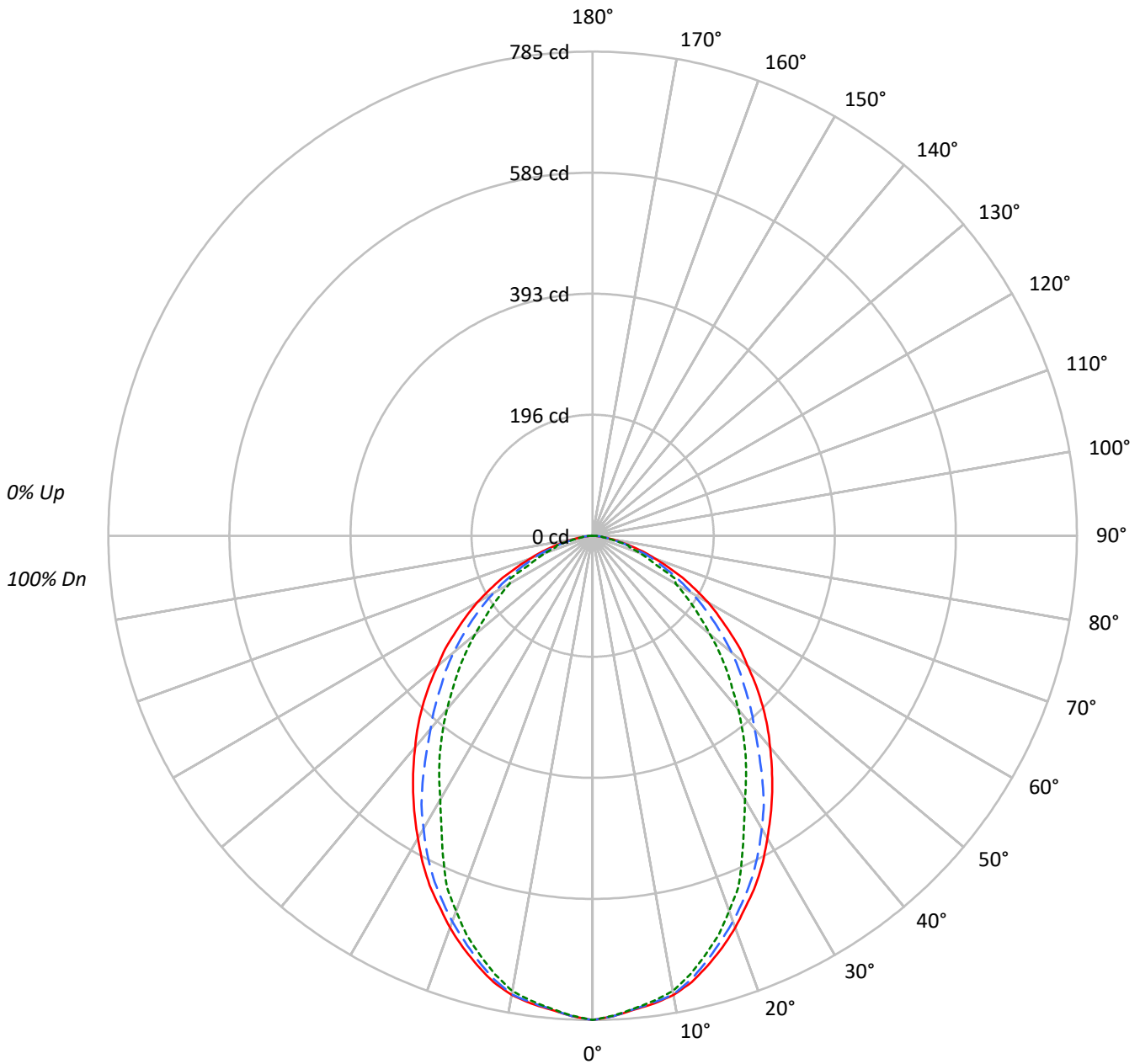
Lumens per Lamp: N/A
Luminaire Lumens: 1541.0 lumens
Efficiency: N/A
Efficacy: 71.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4225	4225	4225
5°	4168	4162	4157
10°	4131	4126	4097
15°	4020	3979	3924
20°	3872	3810	3706
25°	3713	3632	3406
30°	3519	3406	3068
35°	3333	3148	2838
40°	3143	2869	2582
45°	2963	2653	2334
50°	2743	2462	2081
55°	2537	2231	1864
60°	2325	1992	1671
65°	2045	1745	1480
70°	1685	1528	1257
75°	1339	1171	1227
80°	899	843	787
85°	562	673	784



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.1	4.7
10°-20°	200.5	13.0
20°-30°	277.6	18.0
30°-40°	296.0	19.2
40°-50°	270.1	17.5
50°-60°	211.6	13.7
60°-70°	137.9	8.9
70°-80°	61.1	4.0
80°-90°	13.1	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	551.2	35.8
0°-40°	847.3	55.0
0°-60°	1328.9	86.2
0°-90°	1541.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1541.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	785	785	785	785	785	
5°	771	770	770	770	770	73
15°	721	721	714	707	704	203
25°	625	622	612	590	574	287
35°	507	504	479	443	432	317
45°	389	381	348	319	307	300
55°	270	262	238	210	199	243
65°	161	152	137	140	116	158
75°	64	60	56	54	59	69
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	785.0	785.0	785.0	785.0	785.0
2.5°	779.5	779.5	779.5	778.6	778.6
5°	771.4	770.4	770.4	769.5	769.5
7.5°	765.0	764.1	763.2	762.3	760.5
10°	755.9	755.9	755.0	750.5	749.6
12.5°	741.4	740.5	736.9	730.5	728.7
15°	721.4	721.4	714.2	706.9	704.2
17.5°	699.7	698.8	689.7	682.4	678.8
20°	676.1	674.3	665.2	653.4	647.0
22.5°	649.8	649.8	638.9	623.4	617.1
25°	625.2	621.6	611.6	589.9	573.5
27.5°	597.1	591.7	580.8	549.9	530.9
30°	566.3	563.5	548.1	508.2	493.7
32.5°	537.2	532.7	516.4	474.6	462.8
35°	507.3	503.6	479.1	442.8	432.0
37.5°	477.3	472.8	441.9	412.9	399.3
40°	447.4	441.9	408.4	382.0	367.5
42.5°	419.3	412.0	379.3	351.2	334.9
45°	389.3	381.1	348.5	319.4	306.7
47.5°	359.4	352.1	322.2	292.2	277.7
50°	327.6	321.2	294.0	264.1	248.6
52.5°	301.3	291.3	265.0	235.0	222.3
55°	270.4	262.3	237.8	209.6	198.7
57.5°	242.3	234.1	211.4	185.1	176.0
60°	216.0	204.2	185.1	162.4	155.2
62.5°	186.9	177.9	161.5	142.5	151.5
65°	160.6	151.5	137.0	139.8	116.2
67.5°	131.6	127.0	114.3	101.6	98.0
70°	107.1	101.6	97.1	83.5	79.9
72.5°	85.3	79.9	73.5	66.2	63.5
75°	64.4	59.9	56.3	53.5	59.0
77.5°	44.5	42.7	39.9	37.2	36.3
80°	29.0	28.1	27.2	26.3	25.4
82.5°	17.2	17.2	17.2	17.2	17.2
85°	9.1	10.0	10.9	11.8	12.7
87.5°	5.4	5.4	6.4	7.3	8.2
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)